Trailer Manufacturer

BACKGROUND

A one-man trailer shop in North Carolina produces over 250 utility trailers a year. The owner does MIG welding, using 98%/2% Argon shielding gas as he welds together mild steel.

PROBLEMS & OBJECTIVES

The owner had welded for 22 years using a traditional welding helmet and lens. Two years ago, he developed a very bad skin condition. Skin on this face and ears became very sensitive and began to fall off. His doctor told him that he would need to find a way to keep his skin cool from the hot welding fumes. In addition, the owner/welder needed better protection from UV radiation, which was "bouncing" off the cinderblock walls of his small shop and getting under his conventional welding mask.

The owner's doctor warned that, if he could not protect his skin, he would need to stop welding-in effect, putting him out of business.

ALTERNATIVES CONSIDERED

Merely adding a face seal to his existing helmet would offer some protection from UV/IR, but would make the over-heating problem much worse, as well as cause the inside of the lens to immediately steam-up.

ACTION TAKEN
The owner contacted his welding distributor. The distributor thought that the new Speedglas® Fresh-air® system might help him. The Powered Air-Purifying Respirator (PAPR) blows cool, filtered air over the welder's head and face. The 6 cfm airflow creates positive pressure within the face seal, keeping out harmful gases, fumes and particulates. With the Speedglas auto-darkening lens, the welder can keep the helmet in the "down" position for extended periods of time, further protecting him or her from lingering welding gases or fumes.

FIELD RESULTS

The owner tested the system. He says, "I thought it was going to be heavy, with the battery and all, but I forgot I was wearing it almost immediately."

He immediately bought the unit and, in a few weeks, his skin problem had gone away. In addition, he noticed that his eyes felt much better at the end of the day because they are now protected from irritating gases and fumes.

The owner has now used the system for over 14 months, wearing it 4 to 8 hours a day. He says, "I wouldn't take nothing for it! I'd literally be out of business without it."

He is also very enthusiastic about the Speedglas automatically-darkening lens, which is particularly helpful when he does tack welds.

SPECIFICATIONS

The belt-mounted respirator has three replaceable filtration media, a turbo unit powered by an 8-hour battery, quick connect breathing tube, headcover, air duct assembly, face seal, helmet assembly and welding lens.

The helmet and automatic lens meets ANSI Z87.1 (USA) and CSA Z94.3-M88 (Canada) national standards for eye and face protection. The PAPR system's approval is NIOSH 42 CFR 84.